cles, or bosses, thus superadding the strength of a dome to that of the simple arch, at each point where these bosses are inserted.*

The bosses thus often introduced at the origin, division, and termination of the ribs, resemble those applied by architects to the intersections of the ribs in Gothic roofs, and are much more efficient in producing strength.† These tubercules have the effect of little vaults or domes; and they are usually placed at those parts of the external shell, beneath which there is no immediate support from the internal transverse plates (see Pl. 37, Fig. 8. Pl. 42, Fig. 3. c. d. e. and Pl. 40, Fig. 5.)‡

* These places are usually either at the point of bifurcation, as in Pl. 37, Figs. 2, 7, 9, 10, or at the point of trifurcation, as in Fig. 3.

† The ribs and bosses in vaulted roofs project *beneath* the under surface of the arch; in the shells of Ammonites, they are raised *above* the convex surface.

‡ In Pl. 37, Fig. 9 (A. varians), the strength of the ribs and proportions of the tubercles are variable, but the general character exhibits a triple series of large tubercles, rising from the surface of the transverse ribs. Each of these ribs commences with a small tubercle near the inner margin of the shell. At a short distance outwards is a second and larger tubercle, from which the rib bifurcates, and terminates in a third tubercle, raised at the extremity of each fork upon the dorsal margin.

Many species of Ammonites have also a dorsal ridge or keel, (Pl. 37, Figs. 1. 2. 6.) passing along the back of the shell, immediately over the siphuncle, and apparently answering, in some cases, the further purpose of a cut-water, and keel (Pl. 37, Figs. 1, 2.). In certain species, e. g. in the A. lautus (Pl. 37,